REMARKS

Favorable reconsideration of this application, in light of the following discussion and in view of the present amendment, is respectfully requested. No new matter has been added.

Claim 1 is amended. Claims 4-6 are added. Claims 1-6 are pending and under consideration.

I. Rejection under 35 U.S.C. § 102

In the Office Action, at page 2, claim 1 was rejected under 35 U.S.C. § 102(b) as being unpatentable over Japanese Pat. Pub. No. 02-281670. This rejection is respectfully traversed because Japan '670 does not discuss or suggest:

> *adjusting a distribution of an amount of discharge power* supplied to the discharge sections from the plurality of power sources that supply discharge power to at least two of the discharge sections, so far as the amount of discharge power supplied to any one of the discharge sections is not zero;
>
> *changing combinations of beam modes that are different from one another*, beams being excited in at least two discharge sections; and
>
> wherein said plurality of discharge sections include at least two discharge sections in which mutually different beam modes are excited when respective independent discharges are produced;

as recited in independent claim 1.

In a non-limiting example, the present invention is a gas laser oscillation device that includes discharge sections having electrodes and power sources each connected to the electrodes of each discharge section. The power sources are independently operated and drive the discharge sections for discharge excitation. The discharge sections are designed such that mutually different beam modes are excited when discharge is produced independently in the discharge sections. Various intermediate beam modes may be obtained by altering the distribution of power supplied to the two discharge sections. The present invention provides for the adjustment of the distribution of the amount of discharge power to be supplied from the power sources to at least two of the discharge sections, so long as the amount of power supplied is not zero. Further, the present invention is capable of changing the combination of beam modes that are different from one another, where beams are excited in at least two of the discharge sections. Simultaneous excitation is carried out in at least two discharge sections and the output modes are combined or blended through the adjustment of distribution of discharge power to the discharge sections, thereby changing the output mode of the laser oscillating

device of the present invention.

Japan '670 discusses a gas laser oscillation device including discharge tubes having electrodes. The supply of voltage to the electrodes is controlled by switches that may be turned ON or OFF such that outputted laser beams are different from each other in lateral mode form. The lateral mode can then be instantaneously switched. Japan '670, however, does not appear to make any reference to the discharge sections each having mutually different beam modes that are excited when respective independent discharges are produced. Japan '670 merely makes reference to the supply of voltage to the electrodes of the discharge sections of the gas laser oscillation device being controlled by two switches. Japan '670 does not discuss that distribution of discharge power to the two discharge sections is adjusted, nor does Japan '670 discuss or suggest that the combination of beam modes is changed through the switches. While Japan '670 appears to discuss that simultaneous excitation can be performed by turning both the switches ON, Japan '670 does not discuss or suggest the distribution of discharge power to the two discharge sections. Further, there is no indication that a plurality of power sources are provided, one for each discharge section so that each section has mutually different beam modes excited when independent discharges are produced in each discharge section. Japan '670 does not discuss power sources each connected to the electrodes of each discharge section and does not refer to an adjustment of the distribution of the amount of discharge power supplied to each discharge section.

Therefore, since Japan '670 does not discuss or suggest "adjusting a distribution of an amount of discharge power supplied to the discharge sections from the plurality of power sources that supply discharge power to at least two of the discharge sections, so far as the amount of discharge power supplied to any one of the discharge sections is not zero, and changing combinations of beam modes that are different from one another, beams being excited in at least two discharge sections," nor does Japan '670 discuss or suggest that "said plurality of discharge sections include at least two discharge sections in which mutually different beam modes are excited when respective independent discharges are produced," as recited in independent claim 1, claim 1 patentably distinguishes over the reference relied upon. Accordingly, withdrawal of the § 102(b) rejection is respectfully requested.

II. Rejection under 35 U.S.C. § 103

In the Office Action, at page 3, claims 2 and 3 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan '670 in view of Japanese Patent Pub. No. 61-280689. This rejection is respectfully traversed.

Claims 2 and 3 depend directly from independent claim 1. As discussed above, Japan '670 does not discuss or suggest the features of claim 1. Applicants respectfully submit that Japan '689 fails to make up for this deficiency. Japan '689 does not discuss or suggest "adjusting a distribution of an amount of discharge power supplied to the discharge sections from the plurality of power sources that supply discharge power to at least two of the discharge sections, so far as the amount of discharge power supplied to any one of the discharge sections is not zero, and changing combinations of beam modes that are different from one another, beams being excited in at least two discharge sections," nor does Japan '689 discuss or suggest that "said plurality of discharge sections include at least two discharge sections in which mutually different beam modes are excited when respective independent discharges are produced," as recited in claim 1.

Japan '689 discusses obtaining a laser beam of a stable mode by combining two discharge sections having different widths of pairs of electrodes. In Japan '689, the width of a pair of electrodes of a left side discharge tube is made to be larger than the diameter of the tube and the width of a pair of electrodes of a right side discharge tube is made to be smaller than the diameter of the discharge tube. Japan '689 does not make discuss or suggest independent discharges produced such that mutually different beam modes are excited in two separate discharge sections. In fact, Japan '689 states that the mode of the laser beam can be maintained stably. Further, there is no indication that multiple power sources are used to supply discharge power to two discharge sections and that the power sources can adjust the distribution of the amount of discharge power supplied.

The applicants respectfully submit that the rejection fails to establish a prima facie case of obviousness. To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or discuss all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). *See* M.P.E.P. § 2142.

First, the applicants respectfully submit that neither Japan '670 nor Japan '689 refer to all the elements of independent claim 1, as is necessary to establish a prima facie case of obviousness. Specifically, both Japan '670 and Japan '689 fail to disclose "adjusting a

distribution of an amount of discharge power supplied to the discharge sections from the plurality of power sources that supply discharge power to at least two of the discharge sections, so far as the amount of discharge power supplied to any one of the discharge sections is not zero, and changing combinations of beam modes that are different from one another, beams being excited in at least two discharge sections," nor do Japan '670 or Japan '689 discuss or suggest that "said plurality of discharge sections include at least two discharge sections in which mutually different beam modes are excited when respective independent discharges are produced," as recited in independent claim 1.

Second, there is no motivation cited, and specifically, cited *in the prior art* to combine the references. There is no mention made of any motivation to combine the references. Such motivation is an essential component for the establishment of a prima facie case of obviousness.

In establishing a prima facie case of obviousness, impermissible hindsight must be avoided and the legal conclusion must be reached on the basis of the facts gleaned from the prior art. *See* M.P.E.P. § 2142. "To imbue one of ordinary skill in the art with knowledge of the invention in suit, when no prior art references of record convey or suggest that knowledge, is to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teach." W.L. Gore & Associates v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984).

Therefore, as neither Japan '670 nor Japan '689 discuss or suggest all the features of independent claim 1, and because there is no motivation recited, nor found in the prior art, to combine the references, claim 1 patentably distinguishes over the references relied upon. Claims 2 and 3 depend from claim 1 and include all the features of that claim, plus additional features that are not discussed or suggested by the prior art. For example, claim 3 recites that "in the combination of said discharge sections, the discharge sections differ in regard to at least one of dimensions or shape." Therefore, as these claims are dependent from independent claim 1, they are believed to be allowable for at least the reasons noted above. Accordingly, withdrawal of the § 103(a) rejection is respectfully requested.

III. New Claims

New claim 4 recites that the features of the present invention include "at least two discharge sections provided with electrodes, each of the discharge sections having different transverse beam modes excited when independent discharges are produced." Nothing in the references relied upon discusses or suggests such. It is submitted that the new claim 4, which is different from prior filed claims, distinguishes over the references relied upon.

New claim 5 recites a method of controlling beam mode including "providing discharge power from at least two power sources to electrodes provided in at least two discharge sections, the discharge power provided to at least two discharge sections being produced independently, the power sources capable of being individually adjusted to set the discharge power supplied to the respective discharge sections," and that "mutually different beam modes are excited in at least two discharge sections when respective independent discharges are produced." Nothing in the references relied upon discusses or suggests such. It is submitted that the new claim 5, which is different from prior filed claims, distinguishes over the references relied upon.

New claim 6 depends from claim 5, and includes the features of claim 5, plus additional features which distinguish over the references relied upon. For example, claim 6 recites "altering the distribution of power supplied to the discharge sections to produce beam modes intermediate between a first and a second beam mode, the first beam mode being obtained when discharge is effected solely in a first discharge section and the second beam mode being obtained when discharge is effected solely in a second discharge section." Nothing in the references relied upon discusses or suggests such. It is submitted that these new claims distinguish over the prior art.

Conclusion

In accordance with the foregoing, claims 4-6 have been added. Claims 1-6 are pending and under consideration.

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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Date: 2/6/06

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